

PI 1162580

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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

May 06, 2004

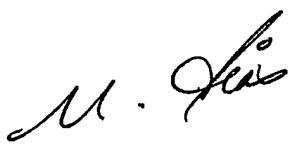
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APPLICATION THAT MET THE REQUIREMENTS TO BE GRANTED A
FILING DATE.

APPLICATION NUMBER: 60/495,655

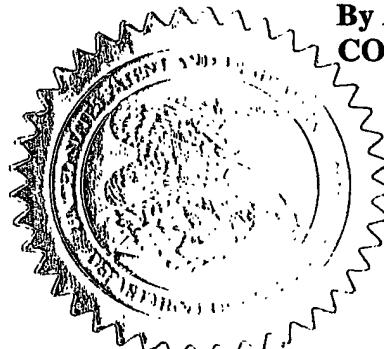
FILING DATE: *August 15, 2003*

RELATED PCT APPLICATION NUMBER: PCT/US04/06568

By Authority of the
COMMISSIONER OF PATENTS AND TRADEMARKS



M. SIAS
Certifying Officer



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PTO/SB/16 (02-01)

Approved for use through 10/31/2002, OMB 0651-0032
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE**PROVISIONAL APPLICATION FOR PATENT COVER SHEET**

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53 (c).

Express Mail Label No. EL 995079250 US

17613 U.S. PTO
60/495655
09/15/03**INVENTOR(S)**

Given Name (first and middle [if any])	Family Name or Surname	Residence (City and either State or Foreign Country)
Carl	Christensen	South Jordan, Utah USA

 Additional inventors are being named on the next separately numbered sheets attached hereto**TITLE OF THE INVENTION (280 characters max)****BROADCAST ROUTER OPTIMIZED FOR ASYMMETRICAL CONFIGURATION****CORRESPONDENCE ADDRESS**

Direct all correspondence to:

 Customer NumberPlace Customer Number
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 Firm or
Individual Name

JOSEPH S. TRIPOLI, THOMSON MULTIMEDIA LICENSING INC.

Address

PATENT OPERATIONS.

Address

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NJ

ZIP

08543-5312

Country

USA

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ENCLOSED APPLICATION PARTS (check all that apply) Specification Number of Pages

2

 CD(s), Number Drawing(s) Number of Sheets Other (specify) Application Data Sheet. See 37 CFR 1.76**METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT (check one)** Applicant claims small entity status. See 37 CFR 1.27. A check or money order is enclosed to cover the filing feesFILING FEE
AMOUNT (\$) The Commissioner is hereby authorized to charge filing fees or credit any overpayment to Deposit Account Number:

07-0832

160

 Payment by credit card. Form PTO-2038 is attached.

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

 No. Yes, the name of the U.S. Government agency and the Government contract number are: _____.Respectfully submitted,
SIGNATURE*Francis A. Davenport*

Date August 15, 2003

TYPED or PRINTED NAME

FRANCIS A. DAVENPORT

REGISTRATION NO.
(if appropriate)

36,316

Docket Number:

PU 0302446

TELEPHONE 609 734-6805

USE ONLY FOR FILING A PROVISIONAL APPLICATION FOR PATENT

This collection of information is required by 37 CFR 1.51. The information is used by the public to file (and by the PTO to process) a provisional application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 8 hours to complete, including gathering, preparing, and submitting the complete provisional application to the PTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Box Provisional Application, Assistant Commissioner for Patents, Washington, D.C. 20231.

08/15/03

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FEE TRANSMITTAL for FY 2003

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT (\$ 160)

Complete If Known	
Application Number	N/A
Filing Date	HEREWITH
First Named Inventor	Carl Christensen
Examiner Name	N/A
Group / Art Unit	N/A
Attorney Docket No.	PU 030246

METHOD OF PAYMENT (check one)	
1. <input type="checkbox"/>	The Commissioner is hereby authorized to charge indicated fees and credit any over payments to:
Deposit Account Number	07-0832
Deposit Account Name	THOMSON multimedia Licensing Inc.
<input checked="" type="checkbox"/> Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17 <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27	
2. <input type="checkbox"/>	Payment Enclosed:
<input checked="" type="checkbox"/> Check <input type="checkbox"/> Credit card <input type="checkbox"/> Money Order <input type="checkbox"/> Other	

FEE CALCULATION				
1. BASIC FILING FEE				
Large Fee Code	Entity Fee (\$)	Small Entity Fee Code (\$)	Entity Fee (\$)	Fee Description
101	740	201	370	Utility filing fee
106	330	206	165	Design filing fee
107	510	207	255	Plant filing fee
108	740	208	370	Reissue filing fee
114	160	214	80	Provisional filing fee
SUBTOTAL (1)				(\$ 160)

2. EXTRA CLAIM FEES				
Total Claims	Extra Claims	Fee from below	Fee Paid	
Independent Claims	-20 **	= 0	X 0	= 0
Multiple Dependent	-3 **	= 0	X 0	= 0
			X 0	= 0
Large Fee Code	Entity Fee (\$)	Small Entity Fee Code (\$)	Fee Description	
103	18	203	9	Claims in excess of 20
102	84	202	42	Independent claims in excess of 3
104	280	204	140	Multiple dependent claim, if not paid
109	84	209	42	** Reissue independent claims over original patent
110	18	210	9	** Reissue claims in excess of 20 and over original patent
SUBTOTAL (2)				(\$ 0)

** or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)					
3. ADDITIONAL FEES					
Fee Code	Large Entity Fee (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid	
105	130	205	65 Surcharge - late filing fee or oath		
127	50	227	25 Surcharge - late provisional filing fee or cover sheet		
139	130	139	130 Non-English specification		
147	2,520	147	2,520 For filing a request for reexamination		
112	920*	112	920* Requesting publication of SIR prior to Examiner action		
113	1,840*	113	1,840* Requesting publication of SIR after Examiner action		
115	110	215	55 Extension for reply within first month		
116	400	216	200 Extension for reply within second month		
117	920	217	460 Extension for reply within third month		
118	1,440	218	720 Extension for reply within fourth month		
128	1,960	228	980 Extension for reply within fifth month		
119	320	219	160 Notice of Appeal		
120	320	220	160 Filing a brief in support of an appeal		
121	280	221	140 Request for oral hearing		
138	1,510	138	1,510 Petition to institute a public use proceeding		
140	110	240	55 Petition to revive - unavoidable		
141	1,280	241	640 Petition to revive - unintentional		
142	1,280	242	640 Utility issue fee (or reissue)		
143	460	243	230 Design issue fee		
144	620	244	310 Plant issue fee		
122	130	122	130 Petitions to the Commissioner		
123	50	123	50 Processing fee under 37 CFR 1.17 (q)		
126	180	126	180 Submission of Information Disclosure Stmt		
581	40	581	40 Recording each patent assignment per property (times number of properties)		
148	740	246	370 Filing a submission after final rejection (37 CFR § 1.129(a))		
149	740	249	370 For each additional invention to be examined (37 CFR § 1.129(b))		
179	740	279	370 Request for Continued Examination (RCE)		
169	900	169	900 Request for expedited examination of a design application		
Other fee (specify) _____					
*Reduced by Basic Filing Fee Paid				SUBTOTAL (3)	(\$ 0)

SUBMITTED BY					
Complete (if applicable)					
Name (Print/Type)	Francis A. Davenport	Registration No. Attorney/Agent)	38,316	Telephone	609-734-6805
Signature	Francis A. Davenport			Date	09/15/03

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

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BROADCAST ROUTER OPTIMIZED FOR ASYMMETRICAL CONFIGURATION

In previous linearly expandable broadcast router architectures each chassis with both input and output cards and would usually be designed to support the same number of outputs and inputs per chassis. While the prior methods have the advantages of a single chassis being capable of providing a complete system, a new advantageous approach has offers configurations when the ratio of inputs to outputs varies significantly from a more usual one to one relationship. This approach also has advantages when constructing very large routers (routers greater than 1024 x 1024).

A novel architecture for a broadcast router. The architecture consists of input chassis and output chassis. Multiple input and output chassis are used allowing for a linear expansion of the router. Linearly expandable broadcast router architectures in the past have not handled extremely asymmetrical (many more inputs than outputs or vice versa) configurations well. Input chassis house input cards and an expansion card. Input cards receive and decode a number of incoming input streams. This data is routed to the expansion card. The expansion card takes all the data from all the input cards and transfers this information to all of the output chassis.

Each output chassis receives data from all of the input chassis and transfers that information into a large matrix. The matrix performs the routing function selecting when information is routed to each output card. The output cards in the output chassis take the data to recreate the associated input stream on the outputs of the router.

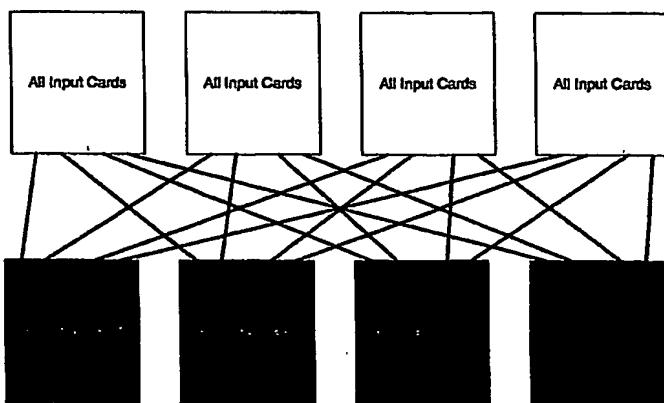


FIGURE 1 is an example of a system configured with the same number of inputs and outputs.

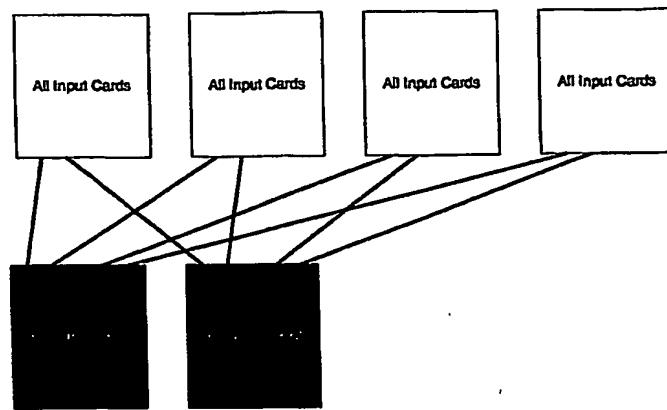


FIGURE 2 is an example of a system with many more inputs than outputs.

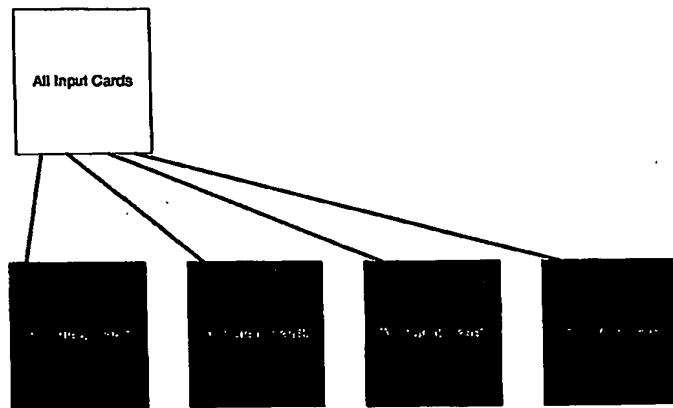


FIGURE 3 is an example of a system with many more outputs than inputs.